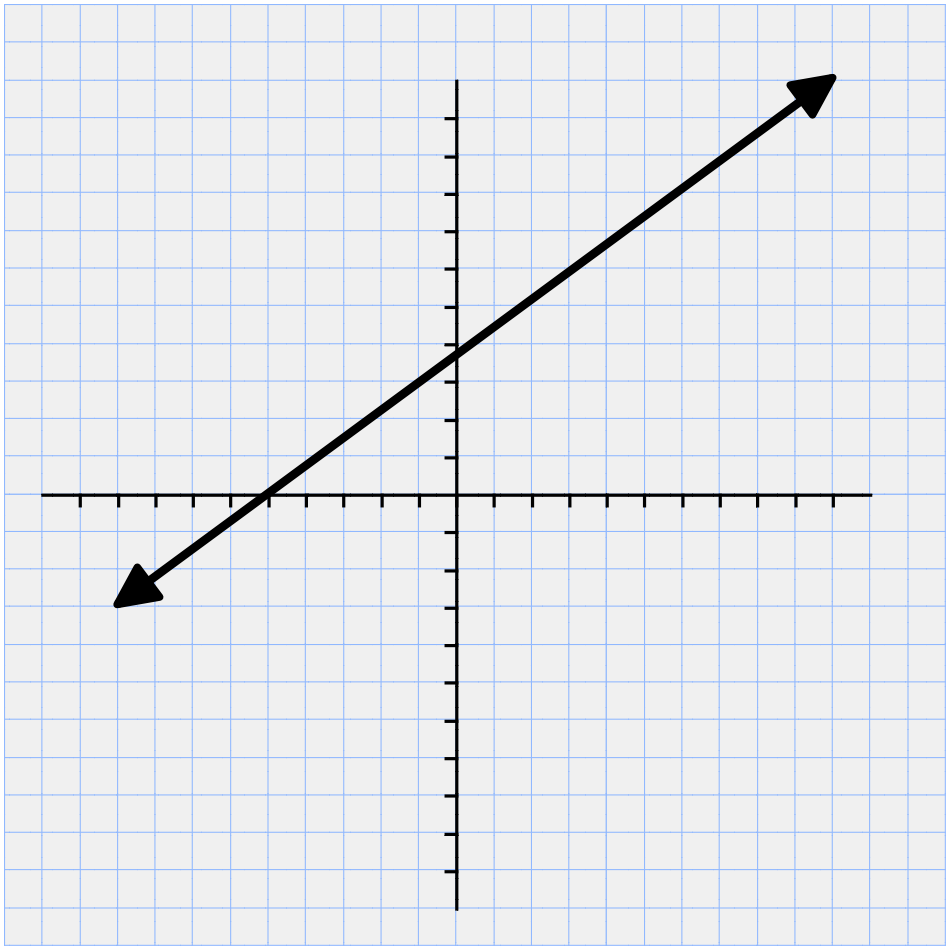
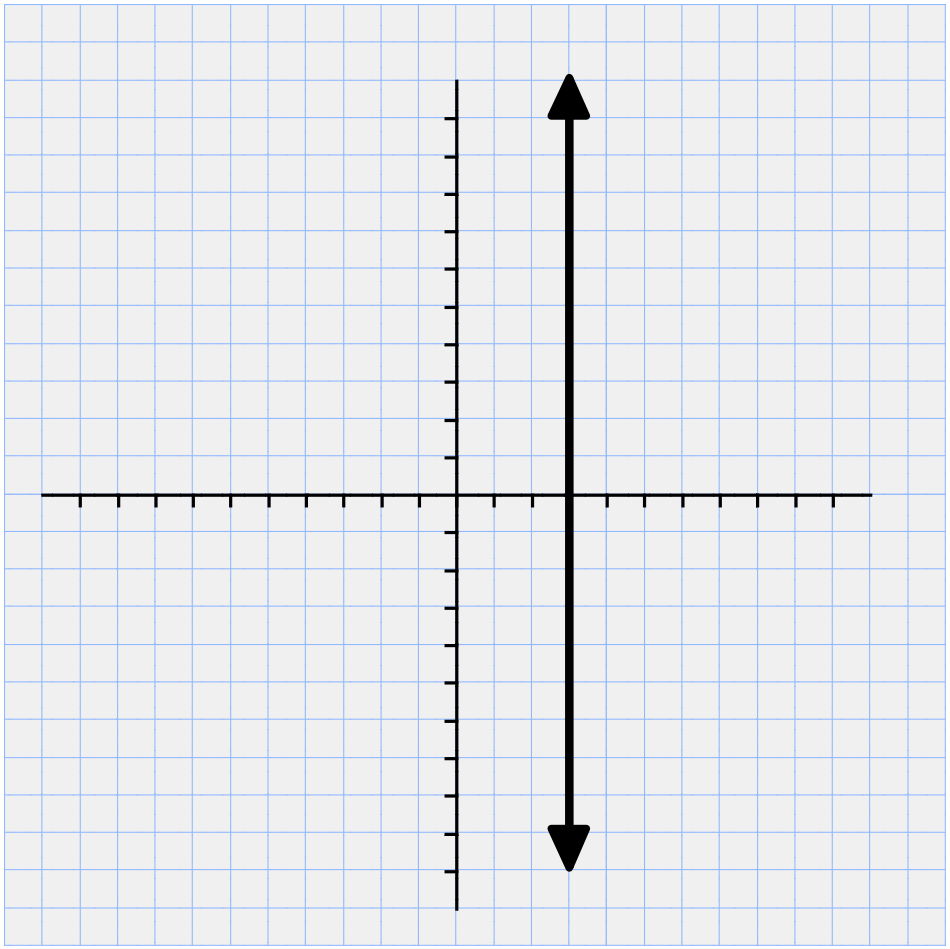
Unit 1 2
Day 3 - Part 1
Finding Domain and Range graphically and algebraically

Give the Domain and range of the function:



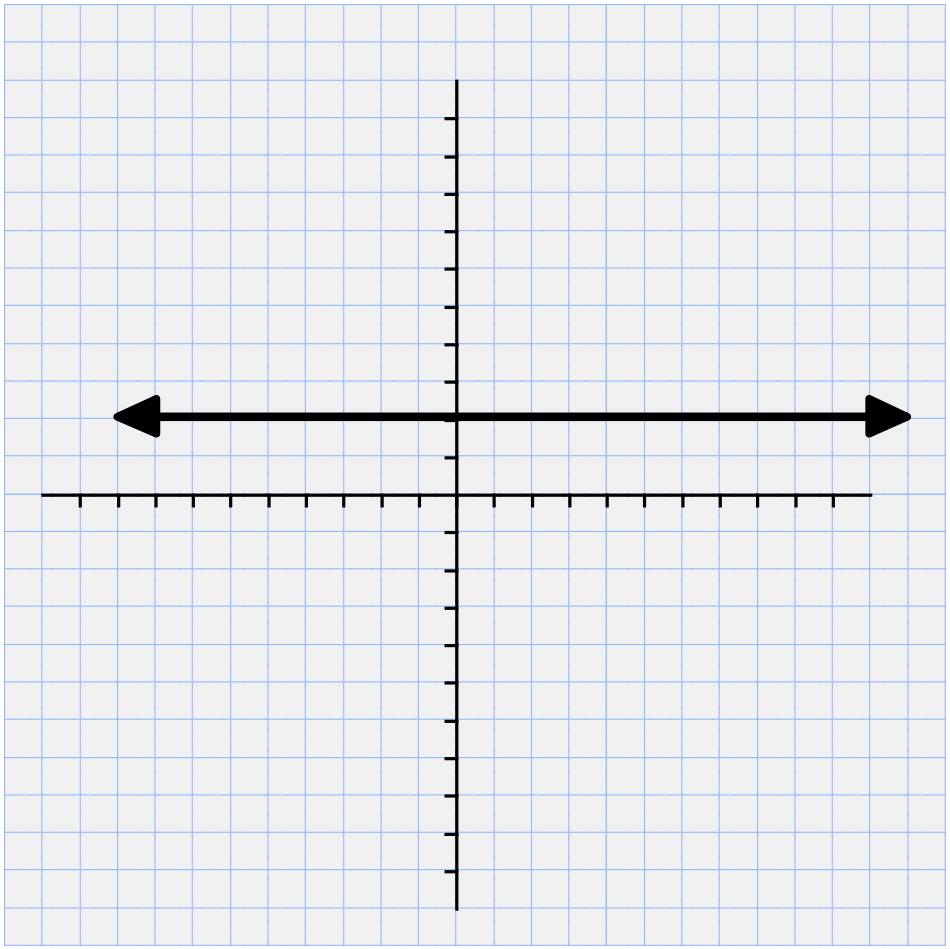
Give the Domain and range of the function:



$D = \{3\}$

$R = (-\infty, \infty)$

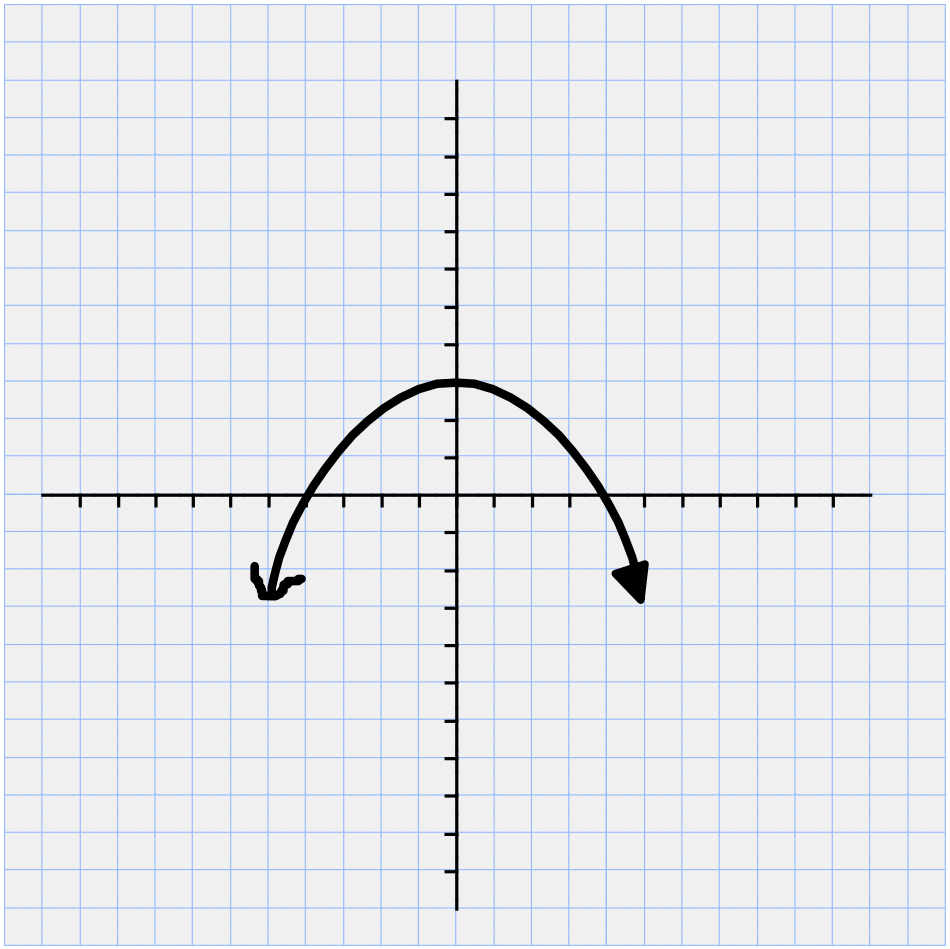
Give the Domain and range of the function:



D: $(-\infty, \infty)$

R: $\{2\}$

Give the Domain and range of the function:



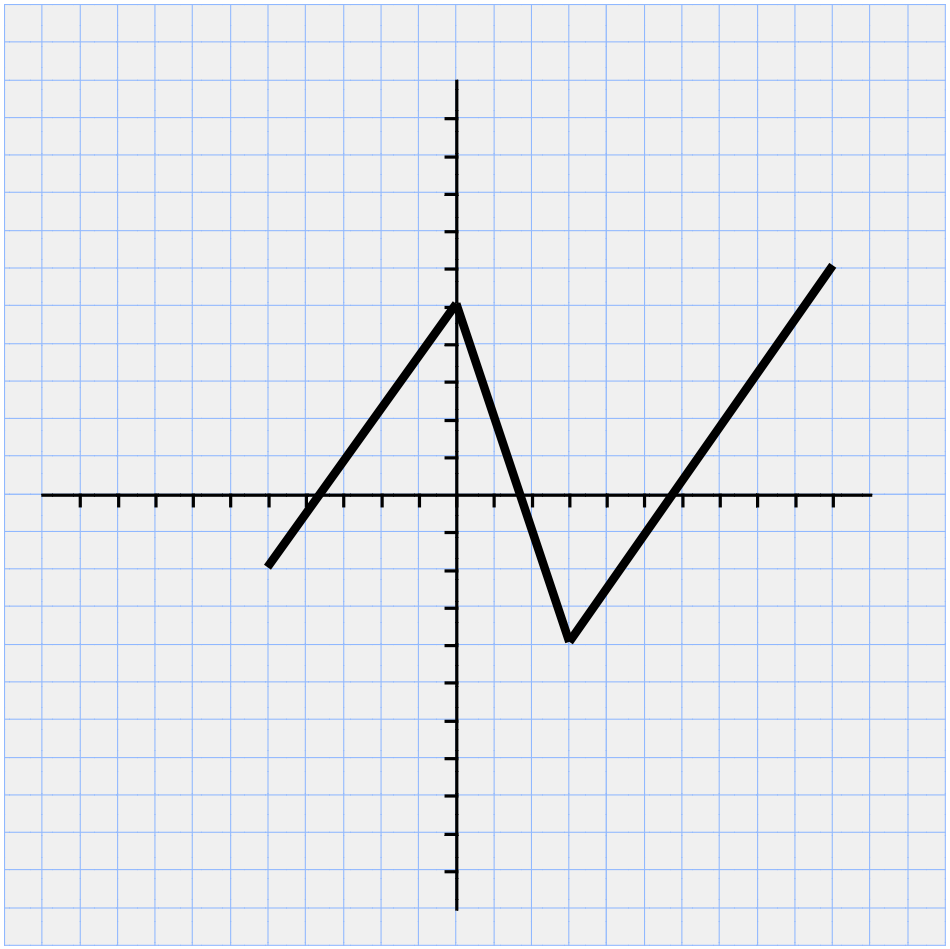
D: $(-\infty, \infty)$

R: $(-\infty, 3]$

Give the Domain and range of the function:

D: $[-5, 10]$

R: $[-4, 6]$



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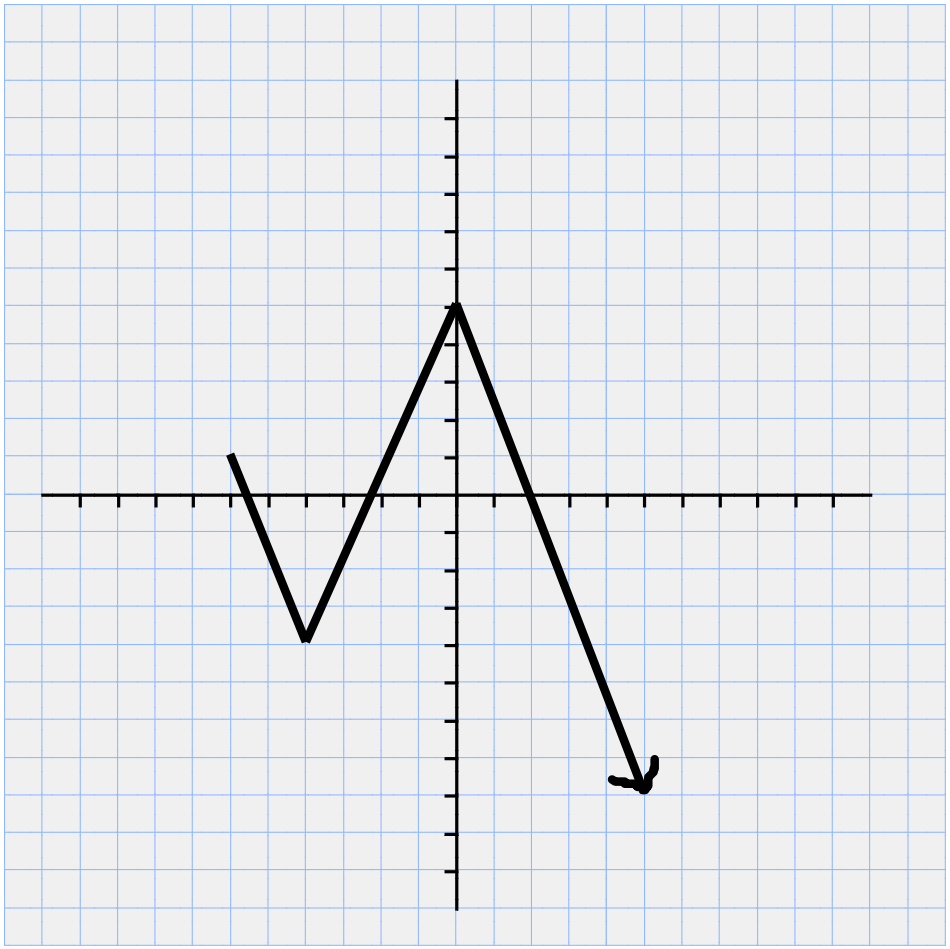

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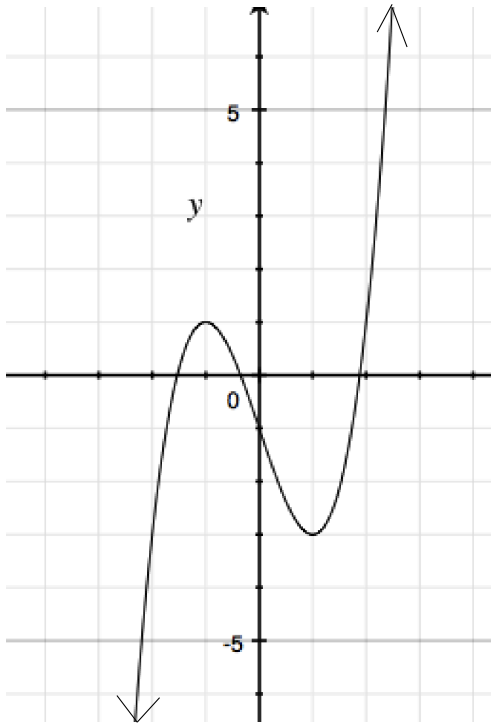
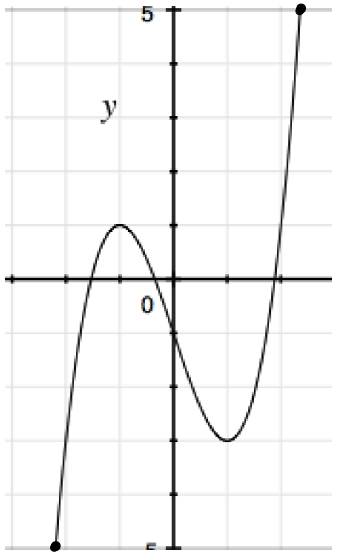


D : $(-\infty, \infty)$

R : $(-\infty, \infty)$

Give the Domain and range of the function:

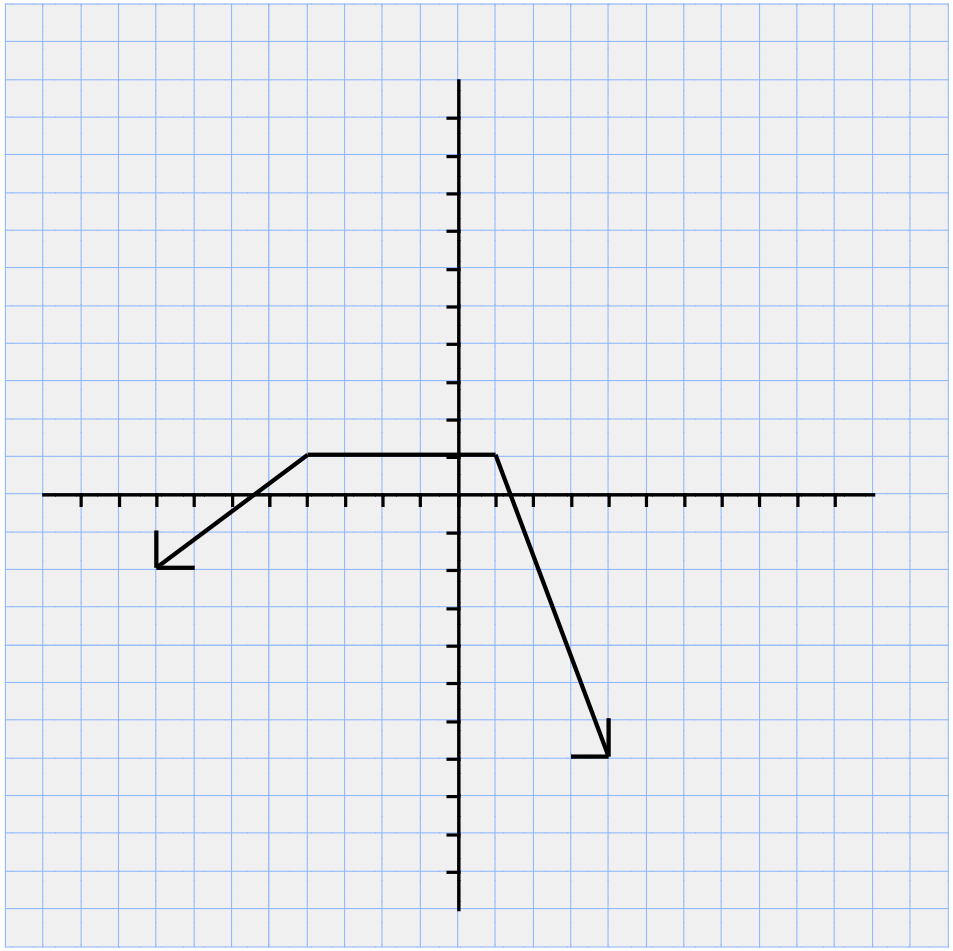


Determine the intervals for which the function is

a) increasing $(-\infty, -4)$

b) decreasing $(1, \infty)$

c) constant $(-4, 1)$

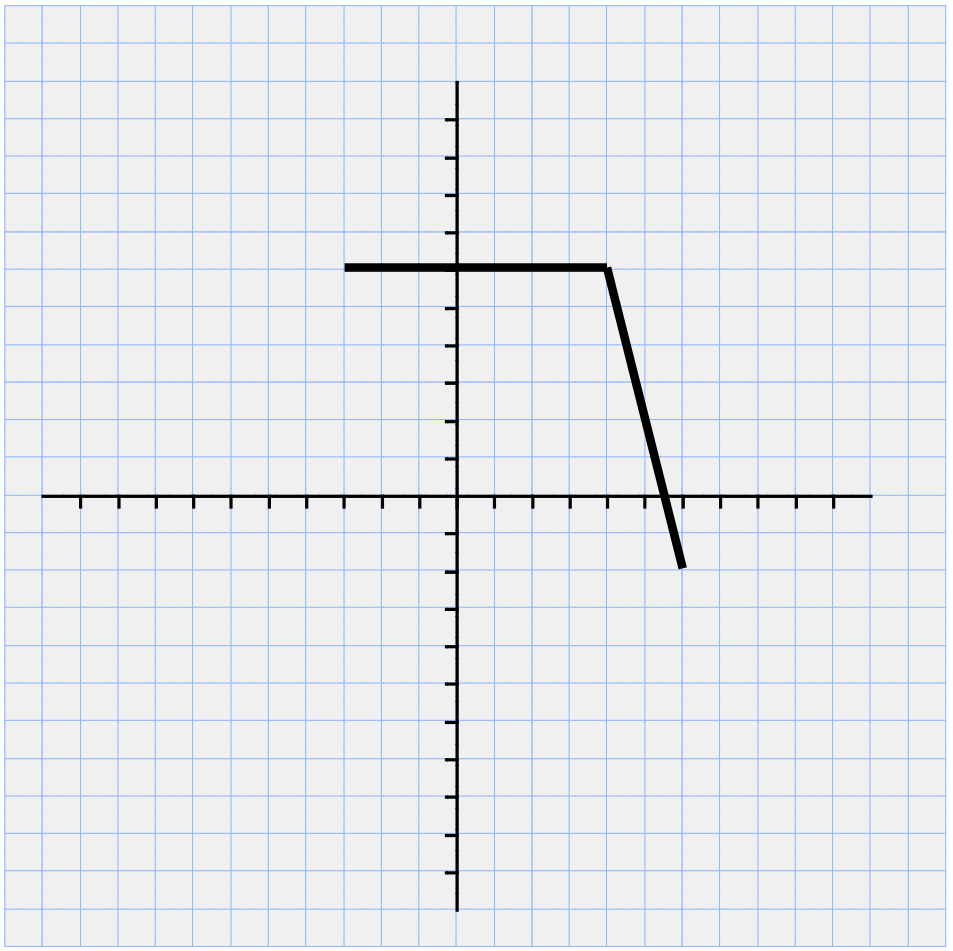


Determine the intervals for which the function is

a) increasing

b) decreasing $(4, 6)$

c) constant $(-3, 4)$

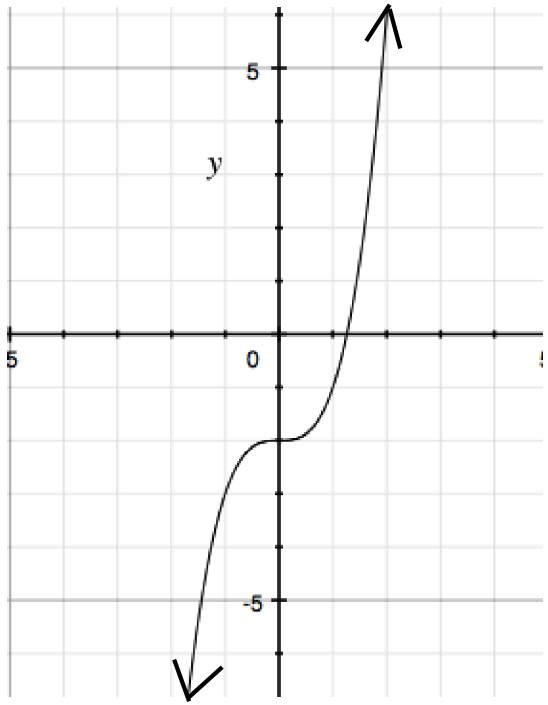


Determine the intervals for which the function is

a) increasing $(-\infty, \infty)$

b) decreasing

c) constant

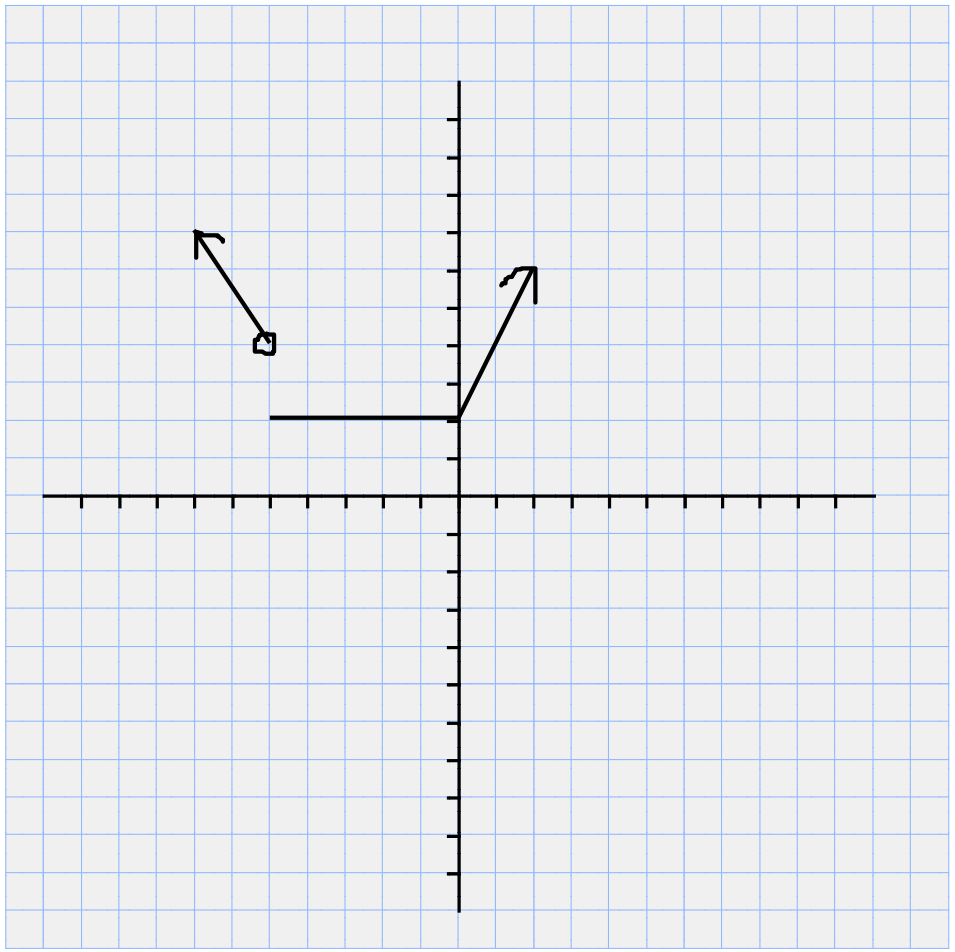


Determine the intervals for which the function is

a) increasing

b) decreasing

c) constant

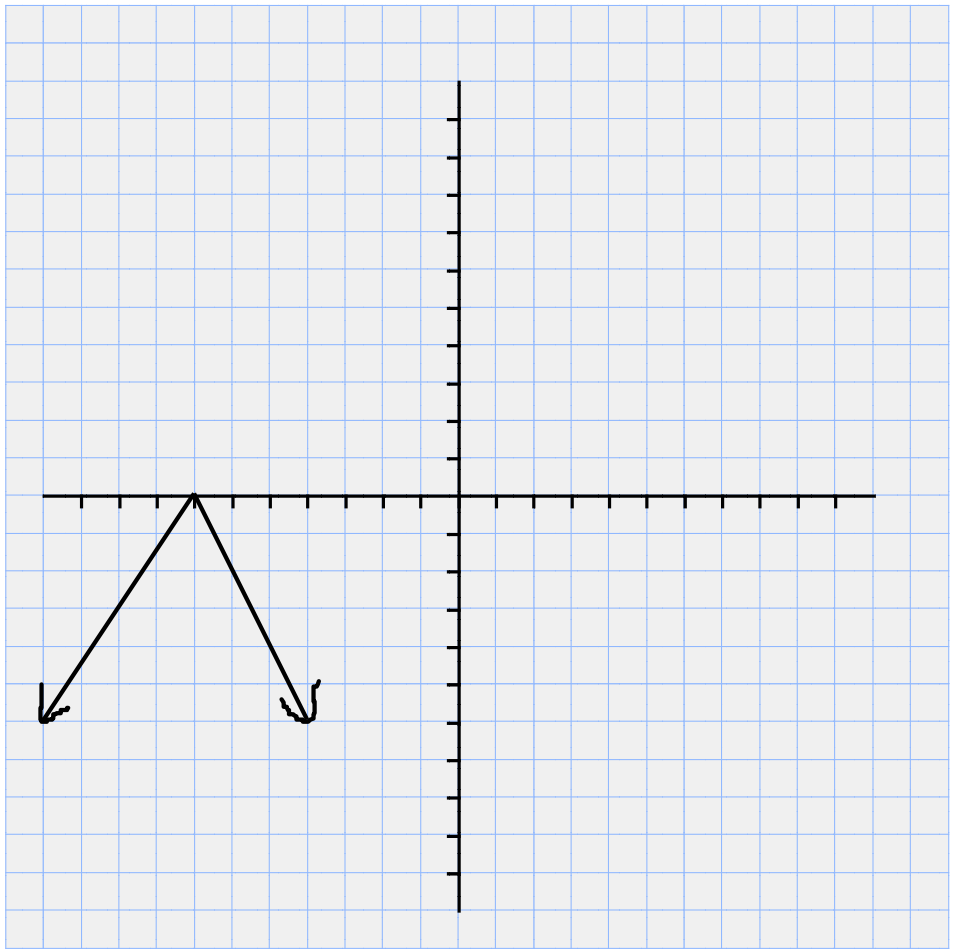


Determine the intervals for which the function is

a) increasing

b) decreasing

c) constant



Find the domain and range of each function ALGEBRAICALLY.

1) $g(x) = -3x + 4$

D: $(-\infty, \infty)$

$-3x$: $(-\infty, \infty)$

$-3x+4$: $(-\infty, \infty)$

R: $(-\infty, \infty)$

2) $f(x) = x^3$

D: $(-\infty, \infty)$

x^3: $(-\infty, \infty)$

R: $(-\infty, \infty)$

Find the domain and range of each function ALGEBRAICALLY.

3) $f(x)=(x-5)^2$

D: $(-\infty,\infty)$

$x-5$: $(-\infty,\infty)$

$(x-5)^2$: $[0,\infty)$

4) $f(x)=-\sqrt{4-x}$

$4-x\geq 0$

$-x\geq -4$

$x\leq 4$

D: $(-\infty,4]$

$-x$: $[-4,\infty)$

$4+-x$: $[0,\infty)$

$\sqrt{4-x}$: $[0,\infty)$

$-\sqrt{4-x}$: $(-\infty,0]$

Find the domain and range of each function ALGEBRAICALLY.

5) $f(x)=\sqrt{9-x^2}$

$9-x^2 \geq 0$

$-x^2+9 \geq 0$

$x^2-9 \leq 0$

$(x-3)(x+3) \leq 0$

D : $[-3,3]$

x^2 : $[0,9]$

$-x^2$: $[-9,0]$

$9-x^2$: $[0,9]$

$\sqrt{9-x^2}$: $[0,3]$

R : $[0,3]$

Homework:

Day 3
p. 192-193: 45-70 (all)